



DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2021-0620; Project Identifier 2019-SW-074-AD; Amendment 39-21766; AD 2021-21-06]

RIN 2120-AA64

Airworthiness Directives; Hélicoptères Guimbal Helicopters

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule.

SUMMARY: The FAA is adopting a new airworthiness directive (AD) for Hélicoptères Guimbal (HG) Model Cabri G2 helicopters with certain part-numbered aluminum cooling fans (cooling fan) installed. This AD was prompted by a report of an occurrence of an in-flight shutdown due to a crack and subsequent failure of the cooling fan. This AD requires removing certain part-numbered cooling fans from service, or modifying certain part-numbered cooling fans before exceeding a certain total hours time-in-service (TIS), and installing newly designed cooling fans. This AD also prohibits installing any affected cooling fan on any helicopter. The FAA is issuing this AD to address the unsafe condition on these products.

DATES: This AD is effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

The Director of the Federal Register approved the incorporation by reference of a certain document listed in this AD as of [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

ADDRESSES: For service information identified in this final rule, contact Hélicoptères Guimbal, Basile Ginel, 1070, rue du Lieutenant Parayre, Aéroport d'Aix-en-Provence, 13290 Les Milles, France; telephone 33-04-42-39-10-88; email basile.ginel@guimbal.com; web <https://www.guimbal.com>. You may view the referenced service information at the FAA, Office of the Regional Counsel, Southwest Region, 10101 Hillwood Pkwy., Room 6N-321, Fort Worth, TX 76177. For information on the

availability of this material at the FAA, call (817) 222-5110. Service information that is incorporated by reference is also available at <https://www.regulations.gov> by searching for and locating Docket No. FAA-2021-0620.

Examining the AD Docket

You may examine the AD docket at <https://www.regulations.gov> by searching for and locating Docket No. FAA-2021-0620; or in person at Docket Operations between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this final rule, the European Union Aviation Safety Agency (EASA) AD, any comments received, and other information. The street address for Docket Operations is U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE, Washington, DC 20590.

FOR FURTHER INFORMATION CONTACT: Andrea Jimenez, Aerospace Engineer, COS Program Management Section, Operational Safety Branch, Compliance & Airworthiness Division, FAA, 1600 Stewart Ave., Suite 410, Westbury, NY 11590; telephone (516) 228-7330; email andrea.jimenez@faa.gov.

SUPPLEMENTARY INFORMATION:

Background

The FAA issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 by adding an AD that would apply to Hélicoptères Guimbal (HG) Model Cabri G2 helicopters with a cooling fan part number P/N G52-00-000; or P/N G52-00-001 or P/N G52-04-100, if it is or has previously been mounted on a 12-hole engine pulley P/N G52-10-100 or P/N G52-10-101, installed. The NPRM published in the *Federal Register* on August 9, 2021 (86 FR 43449). In the NPRM, the FAA proposed to require removing from service any affected part-numbered cooling fan. As an alternative for certain part-numbered cooling fans, modifying the cooling fan before it exceeds a certain total hours TIS was proposed.

The NPRM was prompted by a series of EASA ADs beginning with EASA AD 2014-0038, dated February 14, 2014 (EASA AD 2014-0038), issued by EASA, which is the Technical Agent for the Member States of the European Union, to correct an unsafe condition for Hélicoptères Guimbal Model Cabri G2 helicopters. EASA advised of a

report of an in-flight engine shutdown caused by a failure of the cooling fan. EASA further advised the failure of the cooling fan was caused by a crack in the fan external ring. After EASA AD 2014-0038 was issued, an occurrence was reported of an in-flight failure caused by failure of the cooling fan, which was determined to be caused by a crack on the cooling fan front flange.

Accordingly, EASA issued EASA AD 2014-0196, dated September 2, 2014 (EASA AD 2014-0196), which retained the modification requirements of EASA AD 2014-0038 and required repetitive inspections of the engine cooling fan front flange and corrective actions depending on the findings. After EASA issued EASA AD 2014-0196, further analysis determined the crack propagation depends mainly on the engine start/stop (ESS) cycles. Therefore, EASA superseded EASA AD 2014-0196 with EASA AD 2016-0033, dated February 24, 2016 (EASA AD 2016-0033), which retained the inspection and modification requirements of EASA AD 2014-0196 and depending on the findings, required replacement of the affected part pending approval of the newly designed part.

After EASA issued EASA AD 2016-0033, HG developed a newly designed engine cooling fan P/N G52-04-101, which consists of composite materials having improved structural strength. Accordingly, EASA superseded EASA AD 2016-0033 with EASA AD 2017-0039, dated February 24, 2017 (EASA AD 2017-0039), which retained the requirements of EASA AD 2016-0033 and required replacing the affected cooling fans with the newly designed cooling fan which terminated the repetitive inspections from EASA AD 2016-0033.

Since EASA issued EASA AD 2017-0039, HG issued a revision to its service bulletin requiring a life limit requirement for the replacement of the affected cooling fans. Accordingly, EASA superseded EASA AD 2017-0039 with EASA AD 2019-0187, dated July 31, 2019, and corrected August 2, 2019 (EASA AD 2019-0187). EASA AD 2019-0187 retains some of the requirements in EASA AD 2017-0039 and requires a new compliance time and life limit for the replacement of the affected part. EASA AD 2019-0187 also removes the modification and inspection requirements which are covered by EASA AD 2019-0025, dated February 4, 2019.

The unsafe condition described in the EASA ADs, if not addressed, could result in failure of the cooling fan and subsequent engine in-flight shut-down and reduced control of the helicopter.

Discussion of Final Airworthiness Directive

Comments

The FAA received comments from one commenter. The following presents the comment received on the NPRM and the FAA's response.

Request to Change the Summary Paragraph

Hélicoptères Guimbal requested the FAA revise the references made to the amount of in-flight shut-down occurrences; the commenter stated that there were not two engine shutdowns due to fan failure but one. The FAA agrees that there was only one occurrence of an in-flight shut-down, and one occurrence of an in-flight failure.

Therefore, the FAA has revised this final rule accordingly.

Conclusion

The FAA reviewed the relevant data and determined that air safety requires adopting this AD as proposed. Accordingly, the FAA is issuing this AD to address the unsafe condition on these products. Except for minor editorial changes, including the changes described above, this AD is adopted as proposed in the NPRM. These changes do not increase the scope of the AD.

Related Service Information Under 1 CFR Part 51

The FAA reviewed Guimbal Service Bulletin SB 16-021 E, dated August 27, 2019. This service information specifies instructions for retrofitting the cooling fan with the new front flange, aft ring, and 24-hole pulley. This service information also specifies that upon completion of all the required actions, the cooling fan assembly P/N G52-00-000, P/N G52-00-001, and P/N G52-04-100 become P/N G52-04-101.

This service information is reasonably available because the interested parties have access to it through their normal course of business or by the means identified in the ADDRESSES section.

Other Related Service Information

The FAA also reviewed Guimbal Service Bulletin SB 16-021 D, dated May 20,

2019, which specifies procedures for accessing the cooling fan and removing it from service; modifying, applying adhesive and torqueing the rear flange; installing the improved cooling fan, and additional actions.

Differences Between this AD and EASA AD 2019-0187

EASA AD 2019-0187 allows certain cooling fans with certain total hours TIS to be retrofitted before exceeding their life limit, whereas this AD requires removing these cooling fans from service or as an alternate to removing them from service, modifying the cooling fan before exceeding the total hours TIS. EASA AD 2019-0187 allows a compliance time in months TIS to replace certain part-numbered cooling fans, whereas this AD only allow hours TIS.

EASA AD 2019-0187 retains the compliance time of March 10, 2017, which is the effective date of EASA AD 2017-0039. This AD requires compliance within the effective date of this AD. The FAA has determined that these compliance times are adequate to address the identified unsafe condition.

Costs of Compliance

The FAA estimates that this AD affects 32 helicopters of U.S. Registry. Labor rates are estimated at \$85 per work-hour. Based on these numbers, the FAA estimates the following costs to comply with this AD.

Removing the affected cooling fan from service and installing the newly designed cooling fan takes about 16 work-hours and parts cost about \$4,600 for an estimated cost of \$5,960 per replacement and \$190,720 for the U.S. fleet.

Authority for this Rulemaking

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. Subtitle VII: Aviation Programs, describes in more detail the scope of the Agency's authority.

The FAA is issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701: General requirements. Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds

necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on helicopters identified in this rulemaking action.

Regulatory Findings

This AD will not have federalism implications under Executive Order 13132. This AD will not have a substantial direct effect on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify that this AD:

- (1) Is not a “significant regulatory action” under Executive Order 12866,
- (2) Will not affect intrastate aviation in Alaska, and
- (3) Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

The Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA amends 14 CFR part 39 as follows:

PART 39 - AIRWORTHINESS DIRECTIVES

- 1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

- 2. The FAA amends § 39.13 by adding the following new airworthiness directive:

2021-21-06 Hélicoptères Guimbal: Amendment 39-21766; Docket No. FAA-2021-0620; Project Identifier 2019-SW-074-AD.

(a) Effective Date

This airworthiness directive (AD) is effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

(b) Affected ADs

None.

(c) Applicability

This AD applies to Hélicoptères Guimbal (HG) Model Cabri G2 helicopters, certificated in any category, the following aluminum cooling fan (cooling fan) part number (P/N) installed:

(1) P/N G52-00-000,

(2) P/N G52-00-001 or P/N G52-04-100, if it is or has previously been mounted on a 12-hole engine pulley P/N G52-10-100 or P/N G52-10-101.

(d) Subject

Joint Aircraft Service Component (JASC) Code: 7100, Powerplant System.

(e) Unsafe Condition

This AD was prompted by a report of an in-flight engine shutdown due to a crack and subsequent failure of the cooling fan. The FAA is issuing this AD to prevent failure of the cooling fan. This condition, if not addressed, could result in an in-flight engine shut-down and loss of control of the helicopter.

(f) Compliance

Comply with this AD within the compliance times specified, unless already done.

(g) Required Actions

(1) For Model Cabri G2 helicopters with cooling fan P/N G52-00-000 installed, within 150 hours time-in-service (TIS) after the effective date of this AD:

(i) Remove the cooling fan from service by following the Required Actions, Cooling Fan Removal, paragraphs a) through g), of Guimbal Service Bulletin SB 16-021 E, dated August 27, 2019 (SB 16-021 Rev E), except you are not required to discard any parts.

(ii) Install the improved cooling fan P/N G52-04-101 by following the Required Actions, Cooling Fan Installation, paragraphs a) through j), of SB 16-021 Rev E.

(2) For Model Cabri G2 helicopters with a cooling fan P/N G52-00-001 or P/N G52-04-100 that is mounted or was previously mounted on a 12-hole engine pulley P/N G52-10-100 or P/N G52-10-101, and with 1,500 or more total hours TIS, since first installation on a helicopter, within 150 hours TIS after the effective date of this AD:

(i) Remove the cooling fan from service by following the Required Actions, Cooling Fan Removal, paragraphs a) through g), of SB 16-021 Rev E, except you are not required to discard any parts, or remove the cooling fan by following the Required Actions, Cooling Fan Removal, paragraphs a) through g), of SB 16-021 Rev E and modify the cooling fan by following the Required Actions, Cooling Fan Retrofit, paragraphs a) through h) of SB 16-021 Rev E.

(ii) Install the improved cooling fan P/N G52-04-101 by following the Required Actions, Cooling Fan Installation, paragraphs a) through j), of SB 16-021 Rev E.

(3) For Model Cabri G2 helicopters with a cooling fan P/N G52-00-001 or P/N G52-04-100 that is mounted or was previously mounted on a 12-hole engine pulley P/N G52-10-100 or P/N G52-10-101 and with 500 total hours TIS but with less than 1,500 total hours TIS, since first installation on a helicopter, within 500 hours TIS after the effective date of this AD, perform the actions required by paragraphs (g)(2)(i) and (ii) of this AD.

(4) For Model Cabri G2 helicopters with a cooling fan P/N G52-00-001 or P/N G52-04-100 that is mounted or was previously mounted on a 12-hole engine pulley P/N G52-10-100 or P/N G52-10-101 and with less than 500 total hours TIS since first installation on a helicopter, within 1,000 hours TIS after the effective date of this AD, perform the actions required by paragraphs (g)(2)(i) and (ii) of this AD.

(5) As of the effective date of this AD, do not install any cooling fan listed in paragraph (c) of this AD on any helicopter.

(h) Credit for Previous Actions

This paragraph provides credit for the actions specified in paragraph (g) of this AD, if those actions were performed before the effective date of this AD using Guimbal Service Bulletin SB 16-021 D, dated May 2019.

(i) Alternative Methods of Compliance (AMOCs)

(1) The Manager, International Validation Branch, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or local Flight Standards District Office, as appropriate. If sending information directly to the manager of the International Validation Branch, send it to the attention of the person identified in paragraph (j)(1) of this AD. Information may be emailed to: 9-AVS-AIR-730-AMOC@faa.gov.

(2) Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local flight standards district office/certificate holding district office.

(j) Related Information

(1) For more information about this AD, contact Andrea Jimenez, Aerospace Engineer, COS Program Management Section, Operational Safety Branch, Compliance & Airworthiness Division, FAA, 1600 Stewart Ave., Suite 410, Westbury, NY 11590; telephone (516) 228-7330; email andrea.jimenez@faa.gov.

(2) Guimbal Service Bulletin SB 16-021 D, dated May 20, 2019, which is not incorporated by reference, contains additional information about the subject of this AD. This service information is available at the contact information specified in paragraphs (k)(3) and (4) of this AD.

(3) The subject of this AD is addressed in European Union Aviation Safety Agency (EASA) AD 2019-0187, dated July 31, 2019. You may view the EASA AD at <https://www.regulations.gov> in Docket No. FAA-2021-0620.

(k) Material Incorporated by Reference

(1) The Director of the Federal Register approved the incorporation by reference of the service information listed in this paragraph under 5 U.S.C. 552(a) and 1 CFR part 51.

(2) You must use this service information as applicable to do the actions required by this AD, unless the AD specifies otherwise.

(i) Guimbal Service Bulletin SB 16-021 E, dated August 27, 2019.

(ii) [Reserved]

(3) For service information identified in this AD, contact Hélicoptères Guimbal, Basile Ginel, 1070, rue du Lieutenant Parayre, Aéroport d'Aix-en-Provence, 13290 Les Milles, France; telephone 33-04-42-39-10-88; email basile.ginel@guimbal.com; web <https://www.guimbal.com>.

(4) You may view this service information at the FAA, Office of the Regional Counsel, Southwest Region, 10101 Hillwood Pkwy., Room 6N-321, Fort Worth, TX 76177. For information on the availability of this material at the FAA, call (817) 222-5110.

(5) You may view this service information that is incorporated by reference at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, email: fr.inspection@nara.gov, or go to: <https://www.archives.gov/federal-register/cfr/ibr-locations.html>.

Issued on November 4, 2021.

Ross Landes, Deputy Director for Regulatory Operations,
Compliance & Airworthiness Division,
Aircraft Certification Service.

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